

REMARKS

I. Summary of the Office Action

Claims 1-6, 14, 20-21, 23, and 25-32 were pending in this application.

Claim 1 was objected to due to informalities.

Claims 2-6, 20-21, 25-26, and 28-32 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Claims 2-6, 20-21, 25-26, and 28-32 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 1, 14, 23, and 27 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

Claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by Leather et al. U.S. Patent No. 6,999,100 (hereinafter "Leather").

Claims 23 and 25-32 were rejected under 35 U.S.C. § 102(e) as being anticipated by Deering U.S. Patent No. 6,664,955 (hereinafter "Deering").

Claims 14 and 20 were rejected as being unpatentable over Leather.

II. Summary of Examiner Interview

The Examiner and the undersigned conducted a telephonic interview on July 9, 2009. Applicants wish to thank the Examiner for the courtesies extended during the interview.

During the interview, the Examiner and the undersigned discussed independent claims 1, 14, 23, and 27.

The Examiner indicated that amendments to independent claims 23 and 27 similar to the ones provided in hereinabove would be necessary to overcome the current rejections of those claims.

III. Summary of Applicants' Reply

Applicants have amended claims 23 and 25-28 and added new claims 98-113 to more particularly define the claimed invention. No new matter has been added by the amendments or new claims, and the amendments and new claims are fully supported by the application as filed. See, for example, figure 7 and the corresponding text of applicants' specification.

Applicants have also cancelled claims 1-6, 14, 20, and 21 without prejudice solely in order to expedite prosecution. Applicants respectfully reserve the right to pursue the subject matter of claims 1-6, 14, 20, and 21 in one or more continuing applications.

Applicants respectfully request allowance of this application in light of the amendments and the remarks that follow.

IV. Applicants' Reply to the § 112 Rejections

The Examiner rejected claims 25, 26, and 28-32 under 35 U.S.C. § 112, second paragraph, as being indefinite and claims 23 and 27 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement (Office Action, pages 17-19).

Applicants have amended independent claims 23 and 27 to each recite a method rather than a computer-readable medium (or some combination of the two). Applicants respectfully submit that these amendments

obviate the Examiner's § 112 rejections and request that these rejections be withdrawn.

V. Applicants' Reply to the § 101 Rejection

The Examiner rejected 25, 26, and 28-32 as being directed to non-statutory subject matter (Office Action, page 18).

As discussed above, applicants have amended independent claims 23 and 27 to each recite a method rather than a computer-readable medium (or some non-statutory combination of the two). Applicants respectfully submit that these amendments obviate the Examiner's § 101 rejections and request that these rejections be withdrawn.

VI. Applicants' Reply to the § 102 Rejection of Claims 23, 25, and 26

Applicants' amended independent claim 23 is directed to a method for calculating values for pixels of an image. The pixels are arranged in rows and columns. Sample values for the pixels of the image are calculated in accordance with a plurality of sampling rates. The sampling rates for at least three consecutive pixels in the same row or the same column of pixels alternate per pixel between at least a first sampling rate and a second sampling rate.

For example, as illustrated in the first column of pixels in applicants' FIG. 7, the first three pixels alternate between using a first sampling rate of two pixels per sample and a second sampling rate of one sample per pixel. Accordingly, the first column of applicants' FIG. 7 provides one example of applicants' claimed "the sampling rates for at least three consecutive pixels in one of the

same row and the same column of pixels alternate per pixel between at least first and second sampling rates."

The Examiner rejected applicants' independent claim 23 (prior to amendment) as being anticipated by Deering. In making this rejection, the Examiner cites to FIGS. 5A and 23 of Deering (Office Action, pages 24-26).

Applicants respectfully submit that Deering fails to show or suggest all of the features of applicants' amended independent claim 23. In particular, applicants submit that Deering's FIG. 5A fails to disclose a sampling rate alternating per pixel for at least three consecutive pixels between at least first and second sampling rates. Instead, looking at each row of pixels in Deering's FIG. 5A, the number of samples for a pixel changes only from the first pixel in the row to the second pixel, but remains unchanged from the second pixel onwards. Therefore, at best, Deering's FIG. 5A shows the sampling rate alternating for only two consecutive pixels.

Deering's FIG. 23 also fails to disclose applicants' claimed sampling rates that alternate per pixel for at least three consecutive pixels between at least first and second sampling rates. In FIG. 23, each black circle represents a sample (col. 30, ll. 44-48). Therefore, because the number of black circles is the same for all of the pixels, Deering's FIG. 23 fails to show or suggest first and second sampling rates, let alone alternating between at least the first and second sampling rates for at least three consecutive samples, as required by applicants' amended independent claim 23.

The Examiner may believe that FIG. 23 shows this feature of applicants' claim 23, because the pixels alternate between being a filtered pixel and being an

interpolated pixel. However, nowhere does Deering disclose that the number of samples taken for a pixel changes based on whether the pixel is filtered or interpolated. Rather, this changes only how the sample values are used to compute the value of the pixel (see, e.g., FIG. 21 and the corresponding text of Deering).

Accordingly, applicants respectfully submit that Deering, including FIGS. 5A and 23, fail to show or suggest applicants' claimed "the sampling rates for at least three consecutive pixels in one of the same row and the same column of pixels alternate per pixel between at least first and second sampling rates."

In view of the foregoing, applicants respectfully submit that amended independent claim 23, as well as claims 25 and 26, which each depend from independent claim 23, are allowable in view of Deering. Applicants respectfully request that the rejection of claims 23 and 25-26 be withdrawn.

VII. Applicants' Reply to the § 102 Rejection
of Claims 27-32

Applicants' amended independent claim 27 is directed to a method for calculating values for pixels of an image. The pixels are arranged in rows and columns parallel to first and second perpendicular axes, respectively. Sample values for pixels of the image are calculated in accordance with first and second sampling rates. The sampling rate remains constant for consecutive pixels along any one row. The sampling rates alternate a plurality of times between the first sampling rate and the second sampling rate for at least three consecutive pixels arranged along any one column.

For example, as illustrated in applicants' FIG. 7, any given row of pixels includes consecutive pixels with the same number of samples per pixel (i.e., one or two samples per pixel, depending on the row). The rows of FIG. 7 therefore illustrate applicants' claimed "the sampling rate remains constant for consecutive pixels arranged along any one of the rows." Any given column in applicants' FIG. 7 goes from a pixel with a first sample rate (i.e., two samples per pixel) to a pixel with a second sample rate (i.e., one sample per pixel), then to a pixel with the first sample rate again, and so on. Accordingly, the columns of FIG. 7 provide one example of applicants' claimed "the sampling rates alternate a plurality of times between the first sampling rate and the second sampling rate for at least three consecutive pixels arranged along any one of the columns."

On pages 26-28 of the Office Action, the Examiner contends that Deering shows all of the features of applicants' independent claim 27 (prior to amendment). In particular, the Examiner alleges that FIGS. 5A and 23 of Deering show applicants' claimed first and second sampling rates, which are constant along one axis and varying along the other.

Applicants respectfully submit that Deering fails to show or suggest at least applicants' claimed "the sampling rates alternate a plurality of times between the first sampling rate and the second sampling rate for at least three consecutive pixels." As discussed above in connection with amended independent claim 1, the number of samples per pixel in each row of pixels in Deering's FIG. 5A changes only once (i.e., from one sample per pixel to two samples per pixel), and therefore Deering's FIG. 5A

fails to show or suggest sampling rates that alternate a plurality of times, as required by applicants' amended independent claim 27.

Also, as discussed above in connection with amended independent claim 1, Deering's FIG. 23 does not disclose different sampling rates, let alone sampling rates that alternate a plurality of times between a first sampling rate and a sampling rate.

Accordingly, applicants respectfully submit that Deering fails to show or suggest all of the elements of applicants' amended independent claim 27. Applicants respectfully submit that amended independent claim 27, as well as dependent claims 28-32, which each depend directly or indirectly from independent claim 27, should be found allowable over Deering. Applicants respectfully request that the rejections of claims 28-32 over Deering be withdrawn.

VIII. New Claims 98-105

Applicants have added new claims 98-105, which each depend directly or indirectly from amended independent claims 23 or 27. Applicants have shown above that amended independent claims 23 and 27 are allowable over the prior art of record. Accordingly, applicants respectfully submit that claims 98-105 should also be found allowable over the prior art of record.

IX. New Claims 106-113

Applicants have added new independent system claims 106 and 109 and new dependent system claims 107, 108, and 110-113.

New independent system claims 106 and 109 include many of the features specified in independent method claims 23 and 27, respectively. Applicants have shown above that these independent method claims are allowable over the prior art of record. Accordingly, applicants respectfully submit that new independent claims 106 and 109, as well as dependent claims 107-108 and 110-113, which depend respectively from independent claims 106 and 109, should also be found allowable.

X. Conclusion

Applicants have demonstrated that the claimed subject matter is in condition for allowance.

Should the Examiner have any questions or concerns regarding the amendments and remarks shown in this paper, applicants invite the Examiner to call the undersigned at (212) 715-7622.

Reconsideration and allowance of this application are accordingly respectfully requested.

Respectfully submitted,

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